

Chapter 6 Volume of Prisms and Cylinders

Worksheet C Mixed Practice and Application

Name: _____ Grade: _____ Date: _____

Use $\pi \approx 3.14$.

1. Storage Box

A storage box is 14 cm long, 9 cm wide, and 6 cm high.

a. What measurement is needed if the question asks how much space is inside?

b. Find the volume.

2. Concrete Mold

A rectangular mold is 2 m long, 1.5 m wide, and 0.4 m deep.

Find the volume of concrete needed.

3. Triangular Prism Package

A triangular prism package has a triangular base with base 12 cm and perpendicular height 5 cm.

The package length is 20 cm.

Find the volume.

4. Cylindrical Tank

A cylindrical tank has diameter 18 m and height 10 m.

a. Find the radius.

b. Find the volume.

5. Student Error

A student says:

“A cylinder with diameter 16 cm and height 7 cm has volume $3.14 \times 16^2 \times 7$.”

Explain the mistake and find the correct volume.

6. Surface Area vs Volume

A rectangular prism is 10 cm long, 6 cm wide, and 4 cm high.

a. Find the volume.

b. Find the surface area.

c. Explain why the answers have different units.
